

Appl. No. 10/064,412
Amdt. dated August 31, 2005
Reply to Office action of June 16, 2005

AMENDMENTS TO THE CLAIMS

1. (currently amended) A writing method for CD-MRW comprising:

- (a) obtaining data to be written to a CD-MRW substrate;
- 5 (b) determining a write packet range of the data;
- (c) after completing step (b), identifying any defect blocks in the write packet range;
- (d) after completing step (c), identifying breakpoints in the write packet range based on the defect blocks;
- (e) after completing step (d), splitting the write packet range into at least two
- 10 sub-ranges based on the breakpoints; and
- (f) after completing step (e), individually writing each sub-range.

2. (previously presented) The method of claim 1 wherein the sub-ranges comprise:

- a continuous packet range located in a data area (DA), the continuous packet range
- 15 having no defect blocks; and
- a defect packet range having a defect block;
- wherein different sub-ranges are processed by different writing procedures.

3. (original) The method of claim 2 wherein the continuous packet range further

20 comprises:

- a complete packet range having wholly continuous packets; and
- a partial packet range;
- wherein different continuous packet ranges are processed by different writing
- procedures.

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4. (original) The method of claim 3 wherein the writing procedure of the complete packet range comprises:

- overwriting each packet of the complete packet range directly.

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5. (original) method of claim 3 wherein the writing procedure of the partial packet range comprises:
- (a) reading an original partial packet;
 - 5 (b) replacing corresponding write blocks in the original partial packet to generate a write packet; and
 - (c) writing the entire write packet back over the original partial packet.
6. (original) The method of claim 2 wherein the writing procedure of the defect packet range comprises:
- 10 (a) reading a replace packet in a spare area (SA);
 - (b) replacing corresponding write blocks in the replace packet to generate a modified replace packet; and
 - (c) writing the modified replace packet back to the SA.
- 15 7. (original) The method of claim 1 wherein the writing method further comprises:
- identifying any SAs in the write packet range; and
 - identifying the breakpoints based on the SAs in the write packet range.
- 20 8. (original) The method of claim 1 wherein the breakpoint indicates a packet having a defect block.
9. (original) The method of claim 1 wherein the breakpoint is an SA.
- 25 10. (original) The method of claim 1 wherein the breakpoint is a partial packet.
11. (original) The method of claim 1 wherein the breakpoint is a packet having a defect block.

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12. (currently amended) A reading method for CD-MRW comprising:

- (a) determining a read block range of the data;
- (b) after completing step (a), identifying any defect blocks in the read block range;
- 5 (c) after completing step (b), identifying breakpoints in the read block range based on the defect blocks;
- (d) after completing step (c), splitting the read block range into at least two sub-ranges based on the breakpoints; and
- (e) after completing step (d), individually reading each sub-range.

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13. (previously presented) The method of claim 12 wherein the sub-ranges comprise:

a continuous block range located in a DA, the continuous block range having no defect blocks; and

a defect block range having a defect block;

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wherein different sub-ranges are processed by different reading procedures.

14. (original) The method of claim 13 wherein the reading procedure of the continuous block range comprises:

- (a) reading a block in the continuous block range; and
- 20 (b) transferring data of the block to a host computer.

15. (original) The method of claim 13 wherein the reading procedure of the defect block range comprises:

- (a) reading a replace block in an SA; and
- 25 (b) transferring data of the replace block to a host computer.